

## **ABSTRACT**

A 360-degree magnetoresistive rotary position sensor comprises a magnetic linear sensor and a magnetic angular sensor, formed on a semiconductor substrate. The linear sensor detects a sense of a magnetic field, and the angular sensor detects an angular position of the magnetic field up to 180-degrees. With the linear sensor indicating that a positive sense of the magnetic field is detected, the angular sensor detects a first 180-degrees of angular position. With the linear sensor indicating that a negative sense of the magnetic field is detected, the angular sensor detects a second 180-degrees of angular position. As a result, the position sensor detects a full 360 degrees of rotation.